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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/800,164      | 03/12/2004  | Curt Carrender       | 003424.P068         | 9064             |

8791 7590 10/11/2005

BLAKELY SOKOLOFF TAYLOR & ZAFMAN  
12400 WILSHIRE BOULEVARD  
SEVENTH FLOOR  
LOS ANGELES, CA 90025-1030

EXAMINER

NGUYEN, HOANG V

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2821

DATE MAILED: 10/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/800,164

Applicant(s)

CARRENDER ET AL.

Examiner

Hoang V. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 August 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☒ Claim(s) 1-14 is/are allowed.  
6) ☒ Claim(s) 15-19 and 22-25 is/are rejected.  
7) ☒ Claim(s) 20, 21, 26-29 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 9/15/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/4/05.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

1. The indicated allowability of claims 15-25 is withdrawn in view of the newly discovered reference(s) to McLean (US 6,486,769 B1) and Padhi et al (as disclosed in the IDS filed on 8/4/05). Rejections based on the newly cited reference(s) follow.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 15-18 and 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over McLean over Padhi et al.

Regarding claim 15, McLean (Figure 2) discloses an interrogator comprising a transmitter 124a; a receiver 124b coupled to the transmitter; a decoder 126 coupled to the receiver to decode received signals; and an antenna 122 coupled to the receiver and the transmitter. McLean does not explicitly disclose the antenna configuration. Padhi, however, discloses a dual polarized aperture coupled antenna comprising a patch element coupled to a ground plane, a first strip line in the ground plane to propagate a first polarized signal in a first direction, a second strip line in the ground plane to propagate a second polarized signal in a second direction, wherein the first strip line is activated separately from the second strip line. It would have been obvious to one of ordinary skill in the art at the time the invention was made to

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employ the McLean interrogator with Padhi's antenna, doing so would enable the McLean interrogator with desired high isolation for RFID applications.

Regarding claim 16, as applied to claim 15, Figure 2 of McLean further shows a combiner 124c coupled between the receiver and the transmitter.

Regarding claim 17, as applied to claim 15, Figure 1 of Padhi further shows that the first direction is horizontal and the second direction is vertical.

Regarding claim 18, as applied to claim 15, Figure 1 of Padhi further shows that the ground plane includes an aperture.

Regarding claims 22-25, the device of McLean/Padhi would enable the method as claimed.

4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over McLean in view of Padhi, and further in view of Boyanov (US 2005/0057396 A1).

McLean/Padhi discloses an interrogator comprising a transmitter; a receiver coupled to the transmitter; a decoder coupled to the receiver to decode received signals; and an antenna coupled to the receiver and the transmitter; the antenna comprising a patch element coupled to a ground plane, a first strip line in the ground plane to propagate a first polarized signal in a first direction, a second strip line in the ground plane to propagate a second polarized signal in a second direction, wherein the first strip line is activated separately from the second strip line, and wherein the ground plane includes an aperture. McLean/Padhi does not teach that the aperture is crossed-shaped. Boyanov (Figure 1) discloses a dual polarized antenna comprising a crossed-shaped aperture 26 and 28 in the ground plane 24. It would have been obvious to employ the

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McLean/Padhi interrogator with Boyanov's crossed-shaped aperture in the ground plane, doing so would enable the McLean/Padhi with desired dual polarized coupling.

*Allowable Subject Matter*

5. Claims 1-14 are allowed.

6. Claims 20, 21 and 26-29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 1, Boyanov (US 2005/0057396) fails to specifically teach, among other features, a first impedance matching flare coupled between the first edge of the patch element and the first strip line to adjust characteristics of the antenna; and a second impedance matching flare coupled between the second edge of the patch element and the second strip line to adjust characteristics of the antenna.

Claims 2-14 are allowed for depending on claim 1.

Regarding claim 20 and 21, McLean/Padhi fails to specifically teach, among other features, that the first strip line is coupled to a first edge of the patch element and the second strip line is coupled to a second edge of the patch element.

Regarding claim 26, McLean/Padhi fails to specifically teach, among other features, that the second polarization is oriented greater than zero degrees and less than ninety degrees from the first polarization.

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Regarding claim 27-29, McLean/Padhi fails to specifically teach, among other features, the step of changing a frequency of the first and second signals according to a user-programmed switching profile or an adaptive switching profile.

***Inquiry***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang V. Nguyen whose telephone number is (571) 272-1825. The examiner can normally be reached on Mondays-Fridays from 9:00 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoang Nguyen can be reached on (571) 272-1825. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hvn  
10/5/05



**HOANG V. NGUYEN  
PRIMARY EXAMINER**